

B/ mathematically generating from a point in the multidimensional map a comparison string comprising a dataset;

comparing a number of the target strings with the comparison string to determine for each target string if a mark should be placed on the point in the multidimensional map corresponding to the comparison string; and

repeating the steps of mathematically generating and comparing for a plurality of comparison strings.

32. (Amended) The method of claim 31, wherein the step of mathematically generating the comparison string comprises using an iterative algorithm, such that the comparison string is calculated from a point in any set of points that can serve as the domain of an iterative function.

35. (Amended) The method of claim 31 wherein the step of mathematically generating the comparison string further comprises transforming the numbers of the comparison string to have values within a set of interest.

36. (Amended) The method of claim 31, wherein the step of mathematically generating the comparison string further comprises laying a grid over the points in the multidimensional map.

37. (Amended) The method of claim 31, wherein the step of mathematically generating the comparison string further comprises restarting the step of mathematically generating the comparison string if the iteration has become unbounded.

38. (Amended) The method of claim 31, wherein the step of mathematically generating the comparison string further comprises generating a comparison string of any length.

40. (Amended) The method of claim 39, wherein scoring of the comparison string comprises placing a mark on the point in the multidimensional map if the score or some other property corresponding to the point meets some relevant criteria.

49. (Amended) The method of claim 31, wherein placing a mark on the point in the multidimensional map comprises storing the coordinates of the point corresponding to the target string or properties of the comparison string in memory, a database or a table.

50. (Amended) The method of claim 31, wherein placing a mark on the point in the multidimensional map comprises placing a mark on a point in a video display by changing some graphical property of the corresponding pixel, such as color.

51. (Amended) The method of claim 31, further comprising:
examining a plurality of subregions of the multidimensional map with higher resolution.

64. (Amended) A method for dataset pattern analysis for a plurality of target strings, wherein each target string is a dataset and the target strings can be represented by placing marks on points in a multidimensional map such that patterns within each point or between points are extracted visually or mathematically, the method comprising the following steps:

mathematically generating from a point in the multidimensional map a comparison string comprising a dataset using an iterative algorithm, such that the comparison string is calculated from a point in any set of points that can serve as the domain of an iterative function;

comparing a number of the target strings with the comparison string to determine for each

target string if a mark should be placed on the point in the multidimensional map corresponding to the comparison string; and

repeating the steps of mathematically generating and comparing for a plurality of comparison strings.

65. (Amended) A method for dataset pattern analysis for a plurality of target strings, wherein each target string is a dataset and the target strings can be represented by placing marks on points in a multidimensional map such that patterns within each point or between points are extracted visually or mathematically, the method comprising the following steps:

mathematically generating from a point in the multidimensional map a comparison string comprising a dataset;

scoring of the comparison string by evaluating a function having the comparison string and one of the target strings as inputs, such that the evaluation may be repeated for a number of the other target strings, to determine for each target string if a mark should be placed on the point in the multidimensional map corresponding to the comparison string; and

repeating the steps of mathematically generating and scoring for a plurality of comparison strings.

66. (Amended) A system for dataset pattern analysis for a plurality of target strings, wherein each target string is a dataset and the target strings can be represented by placement of marks on points in a multidimensional map such that patterns within each point or between points are extracted visually or mathematically, the system comprising the following:

means for mathematically generating from a point in the multidimensional map a comparison string comprising a dataset;

means for comparing a number of the target strings with the comparison string to determine for each target string if a mark should be placed on the point in the multidimensional map corresponding to the comparison string; and

means for repeating the means for mathematically generating and means for comparing for a plurality of comparison strings.

67. (Amended) The system of claim 66, wherein the means for mathematically generating the comparison string comprises means for using an iterative algorithm, such that the comparison string is calculated from a point in any set of points that can serve as the domain of an iterative function.

70. (Amended) The system of claim 66 wherein the means for mathematically generating the comparison string further comprises means for transforming the numbers of the comparison string to have values within a set of interest.

71. (Amended) The system of claim 66, wherein the means for mathematically generating the comparison string further comprises means for laying a grid over the points in the multidimensional map.

72. (Amended) The system of claim 66, wherein the means for mathematically generating the comparison string further comprises means for restarting the means for mathematically generating the comparison string if the iteration has become unbounded.

73. (Amended) The system of claim 66, wherein the means for mathematically generating the comparison string further comprises means for generating a comparison string of any length.

75. (Amended) The system of claim 74, wherein the means for scoring of the comparison string comprises means for placing a mark on the point in the multidimensional map if the score or some other property corresponding to the point meets some relevant criteria.